REMARKS

Applicant has carefully reviewed the Final Office Action mailed November 28, 2007 and offers the following remarks.

Claims 4, 5, 9, 13, 14, 22, and 27 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Patent Office states that claims 4, 5, 9, 13, 14, 22, and 27 recite terms different from those recited in the independent claims and therefore fail to particularly point out and distinctly claim the subject matter which Applicant regards as the invention and that there is insufficient antecedent basis for the claim limitations (Final Office Action mailed November 28, 2007, pp. 2-3). Applicant respectfully traverses.

As an initial matter, Applicant requests that the finality of the November 28, 2007 Office Action be withdrawn as being improper. The rejection of claims 4, 5, 9, 13, 14, 22, and 27 under 35 U.S.C. § 112, second paragraph is a new ground of rejection that has not previously been raised. Claims 4, 5, 9, 13, 14, 22, and 27 have not been amended in this case, and the terms referenced by the Patent Office in the independent claims have not been amended. Therefore, no amendment necessitated this new ground of rejection. In fact, Applicant is puzzled why this rejection under 35 U.S.C. § 112, second paragraph is now being made for the first time despite the number of previous office actions. In any event, an office action shall not be made final where the Patent Office introduces a new ground of rejection that is neither necessitated by amendment of the claims nor based on information submitted in an information disclosure statement. MPEP § 706.07(a).

Turning to the rejection itself, Applicant agrees that the terms in dependent claims 4, 5, 9, 13, 14, 22, and 27 are different from the terms in the independent claims; they are intended to be so. That is why those terms have a definite article instead of an indefinite article; they are not intended to have antecedent basis in the terms of the independent claims. Claims 4, 13, 22, and 27 are all directed to an embodiment of the invention in which the link control layer implements a Radio Link Protocol (RLP) using an RLP entity associated with an application running on the receiver. The frames transmitted within the receiver are physical layer frames encapsulating all or a portion of one or more link control layer frames, which further encapsulate data provided from the applications. Accordingly, the retransmission message includes information identifying data or link control layer frames that have not been received by the receiver. This embodiment

of the invention is described in paragraphs 0006 and 0024-0028, as well as Figure 4 of the Specification.

Claim 4 depends from claim 3, claim 13 depends from claim 12, and claim 22 depends from claim 21. Claims 3, 12, and 21 all recite the limitation "wherein the link control layer implements a Radio Link Protocol (RLP) using an RLP entity associated with an application." Thus, claims 4, 13, and 22 are directed to the RLP embodiment and further recite that the frame of claim 1 is a physical layer frame encapsulating data represented by an RLP frame and the sending step of claim 1 further comprises generating the retransmission message to include identification for one of the group consisting of a recently received RLP frame and recently received data such that the sender can identify data or an RLP frame to retransmit. There is nothing indefinite about these claims.

Claims 5, 9, 14, and 27 are also directed to a specific embodiment. In this embodiment, the frames transmitted within the receiver are physical layer frames encapsulating all or a portion of one or more link control layer frames, which further encapsulate data provided from the applications running on the receiver (Specification, paragraph 0006). Claims 5 and 14 depend from independent claims 1 and 10 respectively and recite the further limitation wherein the frame is a physical layer frame and the further limitations of receiving the retransmission message at a link control layer of the sender, determining data or a link control layer frame to retransmit, and retransmitting the data or link control layer frame requiring retransmission. In these claims, the data or link control layer frame to be retransmitted is a specific example of the data and frame references in independent claims 1 and 10. Claims 9 and 27 recite similar limitations. Applicant respectfully submits there is nothing indefinite about claims 5, 9, 14, and 27.

As claims 4, 5, 9, 13, 14, 22, and 27 are not indefinite and do distinctly point out what Applicant regards as his invention, Applicant requests that the rejection under 35 U.S.C. § 112, second paragraph, be withdrawn.

Applicant wishes to thank the Examiner for indicating that claims 4, 13, and 22 would be allowable if rewritten in independent form and the rejections under 35 U.S.C. § 112, second paragraph are overcome. Applicant reserves the right to rewrite claims 4, 13, and 22 at a later time.

Claims 1-3, 5, 7-12, 14, 16-21, 23, and 25-27 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,895,010 B1 to Chang et al. (hereinafter "Chang").

Applicant respectfully traverses. For a reference to be anticipatory, the reference must disclose each and every claim element. Further, the elements of the reference must be arranged as claimed. MPEP § 2131. The requirement that each and every element be disclosed in the manner claimed is a rigorous standard that the Patent Office has not met in this case.

Claim 1 recites a method for initiating retransmission of frames comprising:

a) detecting a failed attempt to transmit a frame at a physical layer of a receiver;

b) sending a message from the physical layer of the receiver to a link control layer of the receiver to indicate the failed attempt to transmit a frame has been detected; and

c) upon receipt of the message, sending a retransmission message from the link control layer of the receiver, the retransmission message configured to cause a sender to retransmit data associated with the frame.

In contrast to the present invention, Chang does not teach "detecting a failed attempt to transmit a frame **at a physical layer of a receiver**," as recited in claim 1. Chang discloses a method for transmitting and receiving data according to RLP without an RLP frame failing due to errors in the physical channel (Chang, col. 2, lines 62-65). The receiving RLP processor requests the transmitting RLP processor to retransmit a failing RTP frame assigned with a new identifier determined by the receiving RLP processor, and in response, the transmitting RLP processor retransmits the failing RLP frame assigned with the requested new identifier instead of the original sequence number (Chang, Abstract). Thus, in Chang, it is the RLP, or link control layer, of the receiver that detects a lost frame and requests the transmitting RLP processor to retransmit the lost frame (See Chang, Abstract; col. 4, lines 33-51; and col. 6, lines 12-59). Chang does not teach detecting a failed attempt to transmit a frame **at a physical layer of a receiver**, and then sending a message from the physical layer of the receiver to a link control layer of the receiver to indicate that the failed attempt to transmit a frame has been detected, as claimed in the present invention.

The Patent Office responds to Applicant's arguments by stating that column 3, lines 13-28 and Figures 2 and 3 of Chang disclose that the transmitting side, receiving side, and the exchange of messages between the transmitting RLP side and the receiving RLP side communicate at a RLP level with the physical layers (Final Office Action mailed November 28, 2007, p. 7). Applicant respectfully disagrees. First, the cited portion of Chang merely states: "According to the present invention, there are provided an apparatus and a method retransmitting

a failing RLP frame assigned with a new unique identifier that is agreed to between the transmitting and receiving RLP processors instead of the original sequence number. The receiving RLP processor requests the transmitting RLP processor to retransmit a failing RLP frame assigned with a new identifier determined by the receiving RLP processor. Responding to the request, the transmitting RLP processor retransmits the failing RLP frame assigned with the requested new identifier instead of the original sequence number." (Chang, col. 3, lines 18-28). There is no mention of "detecting a failed attempt to transmit a frame **at a physical layer of a receiver**," as recited in claim 1. Likewise, Figures 2 and 3 do not show this limitation. Figure 2 merely shows a typical RLP system in which a physical channel is established between the mobile station and the base station by the physical layer processors 150 and 250 in order to transmit the RLP frames. Figure 3 just shows the physical layer processor 150. Neither Figure discloses "detecting a failed attempt to transmit a frame **at a physical layer of a receiver**," as recited in claim 1.

In fact, Chang discloses that the RLP controller 131 of the receiving RLP processor 310 determines whether the received RLP from the MUX/DEMUX controller 140 contains new data or retransmitted data. If new data is detected, the RLP controller 131 stores the received RLP frame into the receiving data buffer 124 provided there is presently no lost or failing frame. However, if there is a lost frame, the RLP controller 131 requests the transmitting RLP processor to retransmit the lost frame and stores the received RLP frame into the rearranging buffer 139 (Chang, Figure 4; and col. 4, lines 33-51). Thus, the RLP controller detects whether there is a lost frame and if so, requests that the transmitting RLP processor retransmit the lost frame. The RLP controller 131 is part of the RLP processor 310, which the Patent Office has alleged to be the link control layer (See Final Office Action mailed November 28, 2007, p. 4). The RLP controller 131 is not part of the MUX/DEMUX controller 140 and physical layer processor 150, which the Patent Office has alleged is the physical layer. Thus, since the RLP controller 131 detects whether there is a lost frame and the RLP controller is not part of the physical layer, Chang does not teach or suggest "detecting a failed attempt to transmit a frame **at a physical layer of a receiver**," as recited in claim 1. Accordingly, since Chang does not teach this element, Chang cannot anticipate claim 1.

Likewise, Chang does not teach "sending a message from the physical layer of the receiver to a link control layer of the receiver to indicate the failed attempt to transmit a frame

has been detected," as recited in claim 1. The Patent Office alleges this limitation is taught in col. 6, lines 12-36 of Chang (Final Office Action mailed November 28, 2007, p. 4). Applicant has reviewed the cited potion of Chang and finds no mention of a message being sent from the physical layer of the receiver (asserted by the Patent Office to be the MUX/DEMUX controller 140 and physical layer processor 150) to the link control layer of the receiver (asserted by the Patent Office to be the RLP processor 310). The cited portion of Chang does mention a request by the RLP processor to retransmit a frame; however, this is not a message **from the physical layer of the receiver to a link control layer of the receiver** to indicate the failed attempt to transmit a frame has been detected, as recited in claim 1. Since Chang does not disclose "sending a message from the physical layer of the receiver to a link control layer of the receiver to indicate the failed attempt to transmit a frame has been detected," as recited in claim 1, Chang does not teach each and every element of claim 1. Claim 1 is thus not anticipated by Chang.

Claim 1 also recites "**upon receipt of the message**, sending a retransmission message from the link control layer of the receiver. . .". The message in question is the message from the physical layer of the receiver to a link control layer of the receiver (see element b of claim 1). The Patent Office opines that the quoted language is taught by Chang in col. 4, lines 33-51 (Office Action mailed May 4, 2007, p. 4). However, since Chang does not disclose "sending a message from the physical layer of the receiver to a link control layer of the receiver to indicate the failed attempt to transmit a frame has been detected," as discussed above, Chang cannot teach sending a retransmission message from the link control layer of the receiver **upon receipt of the message** from the physical layer of the receiver to a link control layer of the receiver. Column 4, lines 33-51 of Chang does disclose that the RLP controller of the receiver detects if there is a lost frame and if so, the RLP controller requests the transmitting RLP processor to retransmit the lost frame. However, there is no discussion of receiving a message at the link control layer from the physical layer of the receiver and then upon receipt of that message, sending a retransmission message from the link control layer of the receiver. Instead, in Chang, the RLP layer simply detects whether there is a lost frame and then requests retransmission. There is no message from the physical layer to the link control layer of the receiver that prompts the link control layer of the receiver to send a retransmission message. Chang requests retransmission upon the RLP controller detecting a lost frame, not **upon receipt of the message** from the physical layer of the receiver to a link control layer of the receiver. Accordingly,

Chang does not teach or suggest "**upon receipt of the message**, sending a retransmission message from the link control layer of the receiver. . .". Since Chang does not teach each and every element of claim 1, claim 1 is thus not anticipated by Chang.

Once again, in response to Applicant's arguments, the Patent Office cites to column 3, lines 13-28 of Chang and makes the broad conclusion that Chang discloses that the transmitting RLP side and the receiving RLP side communicate at a RLP level with the physical layers and that Lee also discloses the processing of RLP frames in a RLP layer and communicating with the physical layer for sending and receiving messages (Final Office Action mailed November 28, 2007, pp. 7-8). First, Applicant is unsure whether the Patent Office is now trying to use Lee as part of an obviousness argument for claims 1-5, 7-14, 16-23, and 25-27. In any event, the assertion that Chang may disclose that the transmitting RLP side and the receiving RLP side communicate at a RLP level with the physical layers, or that Lee may disclose the processing of RLP frames in a RLP layer and communicating with the physical layer for sending and receiving messages, which are points Applicant does not concede, is not a showing of the limitations of the present invention as claimed. The present invention claims "sending a message **from the physical layer of the receiver to a link control layer of the receiver** to indicate the failed attempt to transmit a frame has been detected," and "**upon receipt of the message**, sending a retransmission message from the link control layer of the receiver. . .". Merely disclosing that the transmitter and the receiver communicate at the RLP level with the physical layers, or that RLP frames are processed at the RLP layer, or that the physical layer can be used to send and receive messages is not equivalent to "detecting a failed attempt to transmit a frame **at a physical layer of a receiver**," "sending a message **from the physical layer of the receiver to a link control layer of the receiver** to indicate the failed attempt to transmit a frame has been detected," and "**upon receipt of the message**, sending a retransmission message from the link control layer of the receiver. . .," as recited in claim 1. Thus, claim 1 is patentable.

Claims 2-5 and 7-9 depend from claim 1 and are not anticipated for at least the same reasons. Applicant requests withdrawal of the § 102(e) rejection of claims 1-3, 5, and 7-9 on this basis.

Independent claims 10 and 19 recite similar elements and are not anticipated for at least the same reasons. Dependent claims 2, 3, 5, 7-9, 11, 12, 14, 16-18, 20, 21, 23, and 25-30 depend directly or indirectly from one of the independent claims and further define patentable subject

matter. Thus, these dependent claims are patentable for at least the same reasons set forth above with respect to claim 1.

Claims 28-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chang in view of U.S. Patent No. 6,718,500 B1 to Lee et al. (hereinafter "Lee"). Applicant respectfully traverses. To establish *prima facie* obviousness, the Patent Office must show where each and every element of the claim is taught or suggested in the combination of references. MPEP § 2143.03. If the Patent Office cannot establish obviousness, the claims are allowable.

Claims 28-30 depend from claims 1, 10, and 19 respectively, and all recite the limitation "wherein the message is a primitive indicative of a failed attempt to receive frames in the physical layer." This limitation was present in claims 6, 15, and 24 as filed with the original application. The Patent Office indicated these claims were allowable over Chang and Lee in the first Office Action (see Office Action mailed August 22, 2005, p. 6). The Patent Office admits that Chang fails to disclose this limitation, but now alleges that column 2, lines 38-65 of Lee discloses a method to receive an indication of a failed attempt to receive frames in the physical layer (Final Office Action mailed November 28, 2007, p. 6). Applicant submits that the Patent Office's initial ruling that Chang and Lee did not teach "wherein the message is a primitive indicative of a failed attempt to receive frames in the physical layer" was correct. At best, the cited portion of Lee merely states that the "physical layer of a receiving side informs a radio link protocol that no physical frame has been received." (Lee, column 2, lines 53-56.) However, the cited portion of Lee does not mention a message at all and therefore does not teach or suggest "sending a message from the physical layer of the receiver to a link control layer of the receiver to indicate the failed attempt to transmit a frame has been detected." Certainly, Lee does not teach or suggest "wherein the message is a **primitive indicative** of a failed attempt to receive frames in the physical layer." A primitive indicative of a failed attempt is discussed in paragraph 0024 of the Specification: "For the latter scenario, the physical layer 38 can send a primitive, or like signal, to the RLP entity 44 to inform it that an attempt to transmit a frame was made, but the frame was not properly received. An existing primitive capable of providing such information is the primitive used to calculate frame error rates and ultimately control transmit-power levels." Lee does not disclose a primitive, and thus does not teach or suggest using such a primitive as a message sent from the physical layer of the receiver to a link control layer of the receiver to indicate a failed attempt to receive frames in the physical layer, as recited in claims

28-30. Accordingly, Lee does not teach each and every element of claims 28-30. Claims 28-30 are therefore patentable over Lee and Chang.

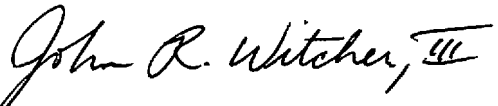
Notably, the Patent Office in the Final Office Action mailed November 28, 2007 does not address why it has changed its mind about the limitations of claims 28-30 being found in the prior art, but merely makes the same rejection. However, as discussed above, neither Chang nor Lee discloses "wherein the message is a primitive indicative of a failed attempt to receive frames in the physical layer," as recited in claims 28-30. The Patent Office has not carried its burden of showing where in the references this limitation is shown.

As a final matter, Applicant does not understand the point in the Response to Arguments section of the Final Office Action mailed November 28, 2007 which alleges that the features upon which Applicant relies on ARQ for RLP retransmission in paragraphs 0016-0018 of the Specification are not recited in the independent claims (Final Office Action mailed November 28, 2007, p. 8). Applicant is unsure to what argument the Patent Office is referring. Applicant is not aware of any reference it made to paragraphs 0016-0018 of the Specification. In addition, Applicant, in the present response, as well as the previous response, argued that limitations clearly recited in the independent claims, were not taught or suggested by the cited references. Applicant therefore requests clarification of this issue raised by the Patent Office if the Patent Office is still relying on this point as part of the rejection.

The present application is now in condition for allowance and such action is respectfully requested. The Examiner is encouraged to contact Applicant's representative regarding any remaining issues in an effort to expedite allowance and issuance of the present application.

Respectfully submitted,

WITHROW & TERRANOVA, P.L.L.C.

By: 

John R. Witcher, III
Registration No. 39,877
100 Regency Forest Drive, Suite 160
Cary, NC 27518
Telephone: (919) 238-2300

Date: January 25, 2008
Attorney Docket: 7000-105